

METHOD FOR PRODUCING GELATINTECHNICAL FIELD

- 5 This invention relates to a method for producing gelatin, and gelatin produced by the method.

BACKGROUND ART

- Conventionally gelatin is prepared from rind, usually from swine, by first chopping the  
10 rind with the accompanying fat layer into pieces of e.g. 60 by 100 mm, hydrolysing the  
chopped rind with acid, e.g. hydrochloric acid, in e.g. 20 to 24 hours, neutralising and  
extracting with water, first at 50°C and thereafter at successively rising temperature,  
the best gelatin quality, high Bloom, being obtained at 50°C. Usually, a yield of 20% to  
40% of the gelatin present in the rind is obtained in high Bloom quality with a Bloom  
15 strength of 280 g.

DISCLOSURE OF THE INVENTION

- It has now been found that a better product and a higher yield is obtained when the  
rind is defatted before it is hydrolysed. Thus the yield of high Bloom gelatin is typically  
20 50% to 60% of the gelatin present in the rind, i.e. about 50% higher than by using the  
conventional method, and the produced gelatin has a higher strength than the gelatin  
produced by the conventional method.

- Accordingly, the method of the invention is characterised by that the rind is defatted  
25 before the hydrolysis, and the gelatin of the invention is characterised by being  
produced by the method of the invention.

Preferably, the defatting is carried out in a continuous process.

- 30 If the rind is sufficiently comminuted, e.g. in pieces of 1 mm, the hydrolysis may also  
be carried out continuously.

- The defatting can be carried out by the addition of steam and hot water to melt off the  
fat from the rind. Thus, US patent no. 2,748,152 discloses the preparation of defatted  
35 rind by heating chopped rind together with water under melting off fat, separation of

the products and purification of the defatted rind by washing with water in a centrifuge. However, the rind defatted in this way is not used for the production of gelatine.

US patent no. 5,877,287 discloses defatting in relation to gelatin production in column 4, lines 17 to 21, in example 1, and in claim 11. In the examples, bones are used as the starting material. The object of the defatting disclosed in the patent is to avoid a particular process step which formerly was necessary for the complete demineralisation of the bone material before the hydrolysis, cf. column 6, lines 23 to 28.

10

The method of the invention differs from the method of said US patent by using another starting material, namely rind instead of bones, and by another object of the defatting, namely obtaining gelatin of a higher quality and higher yield, whereas the object of the method of the US patent is to facilitate the hydrolysis. By the method of the US patent the defatting does not seem to lead to a higher quality gelatin.

15

The invention is further illustrated by the working example below which merely should act as an illustration and by no way as a limitation of the invention.

## 20 EXAMPLE

6,660 kg of rind, chopped into pieces of appr. 5 mm, are defatted with steam and hot water in a continuous process to a fat content of 2% and are carried to a 10 m<sup>3</sup> reactor. This gives 5,000 kg of defatted rind. 5,000 liters of water are filled into the reactor, and 37% hydrochloric acid is added to obtain a pH of 2. After 17 hours the hydrochloric acid is removed and the hydrolysed rind is neutralised with water to obtain a pH of 4. Thereafter the hydrolysed and neutralised rind is extracted with 15 m<sup>3</sup> of water at 50°C for 50 minutes.

25

After evaporation and drying 432 kg of gelatin are obtained with high Bloom quality, which amount to 43% of the gelatin present in the rind. The gelatin has a Bloom strength of 335 g.

30

If the defatting is omitted, the yield is 315 kg corresponding to only 30% of the gelatin present in the rind and the Bloom strength of that gelatin is only 280 g.